Spent Nuclear Fuel Project

Expectation:

Protect the Columbia River by safely moving more than 2,100 metric tons of deteriorating spent nuclear fuel from the aging K Basins to safe, dry, interim storage in the center of Hanford.

Status Update:

- **Finished moving spent fuel from the 327 Building to the K Basins without incident. Some of it was once stored in the K Basins and examined in the 327 Building to help determine strategies for K-Basin cleanup.**

- **Initiated public review of the project's proposed plan, as prescribed by the Comprehensive Environmental Response, Compensation and Liability Act.**

- **Developed a low-cost sludge disposal alternative. It calls for treating the radioactive sludge accumulated in the basins with similar site wastes, saving the taxpayer millions of dollars and potentially accelerating K-Basin cleanup.**

- **Continued installing hardware in the K West Basin to support fuel removal next year.**

A fuel retrieval system support table is installed in the K West Basin.

Spent Nuclear Fuel Project

Status Update (continued):

- Installed a new water treatment system in the K West Basin.
- Took delivery of three test multi-canister overpacks (MCOs) – stainless-steel containers two feet in diameter and 13 feet tall. Each MCO will hold up to six baskets of cleaned fuel assemblies or scrap from the K Basins, be placed in water-filled casks, sealed and vacuum dried for interim safe, dry storage.
- The Canister Storage Building project is 85 percent complete: all 220 storage tubes are in place, and the MCO handling machine was assembled and tested.
- Construction of the Cold Vacuum Drying facility is on track for completion this fiscal year. Design review is complete, the Final Safety Analysis Report submitted to DOE, and process equipment is being procured.

In a successful start-up test at the Canister Storage Building, a prototype transport cask was moved into the facility and lowered into the receiving pit.

Spent Nuclear Fuel Project

Future Focus Areas:

- Finish design of a cask loading system that minimizes the risk of dropping a cask inside the K Basins during fuel movement and retrieval.
- Complete construction on the fuel-retrieval system in the K West Basin.
- Complete construction of the Cold Vacuum Drying facility.
- Streamline the safety analysis process. We'll review, address comments and resubmit to DOE our documents for the Canister Storage Building and Cold Vacuum Drying facility, then complete the last safety analysis report, which covers K Basin work.

An engineer tests a tool to remove lids on the canisters stored in the K Basins so the spent fuel elements can be retrieved. Testing on components of the fuel retrieval system is being conducted in the 305 Building.